IN THE UNITED STATES DISTRICT COURT

FOR THE NORTHERN DISTRICT OF CALIFORNIA

TECHNOLOGY PROPERTIES LIMITED LLC and MCM PORTFOLIO LLC,

Plaintiffs,

v.

CANON INC. et al.,

Defendants.

/

No. C 14-3640 CW

ORDER GRANTING MOTION FOR SUMMARY JUDGMENT

(Docket No. 479)

Defendants Canon Inc. and Canon U.S.A., Inc. (collectively Canon) file this motion for summary judgment against Plaintiffs Technology Properties Limited LLC and MCM Portfolio LLC. As explained below, the Court grants Canon's motion because Canon's products do not infringe the patents-in-suit.

BACKGROUND

Plaintiffs assert two patents in this case: Patent Numbers 7,295,443 (the '443 patent) and 7,522,424 (the '424 patent). The patents describe technology that enables devices to read different types of removable memory cards. The parties do not dispute that the '424 patent is a continuation of the '443 patent and that the two patents contain the same figures and specification, except for a few sentences that were added during the prosecution of the '424 patent. Additionally, the parties do not dispute the following facts concerning two types of removable memory cards: SD Cards and MMC Cards. SD cards have nine contact pads, numbered one through nine, while MMC cards have seven contact pads, numbered one through seven. For both cards, the signal on pins two through

seven are identical, with seven used for data. The SD card uses four signal lines in total for data, while the MMC card uses only one: number seven.

Plaintiffs assert that many Canon products have infringed the patents. The parties have agreed to six representative products. Docket Nos. 413, 416. Plaintiffs allege that at least one of the representative products infringes each of the following claims: claims 1, 3, 4, 7, 9, 11, 12 and 14 of the '443 patent and claims 25, 26, 28 and 29 of the '424 patent. Response Br. at 3 n.3; Busciano Dec., Ex. A, Busciano Opening ¶¶ 101-04. The four independent claims within this set discuss mapping:

> Claim 1, '443 patent: "A multi-memory media adapter comprising . . . a controller chip to map at least a subset of the at least one set of contact pins to a set of signal lines or power lines, based on an identified type of a memory media card."
>
> Claim 9, '443 patent: "A system comprising . . . a controller integrated into the multi-memory media adapter to map at least a subset of the set of contact pins to a set of signal lines or power lines, based an [sic] identified type of the memory media card."
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> Claim 25, '424 patent: "Apparatus comprising . . . means for mapping power, ground or data signals between said interconnection pins and said one or more contact pins depending upon the identification of the type of memory card inserted into said port."
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> Claim 28, '424 patent: "Apparatus comprising . . . means for mapping power, ground or data signals between said interconnection means and said one or more contact pins depending upon the identification of the type of memory card inserted into said port."

The mapping terms were added during the prosecution of the '443 patent in light of the Hung-Ju patent, described below.

The Court construed the claims in an Order dated September 18, 2015. Docket No. 334, Claim Construction Order.[1] There, the Court concluded that "to map" means "to assign," id. at 11, and that "means for mapping" is a means plus function claim in which mapping is the function and the structure is "a controller," id. at 17. The Court noted that it was beyond the scope of claim construction to conclude whether "mapping" must be physical or logical. Id. at 11. Also, the Court declined to incorporate into its construction that "'mapping' must mean varying the assignments such that using signal lines in some circumstances but not in others does not constitute mapping." Id. at 10. Specifically, the Court declined Canon's invitation to further limit the terms in a way that excludes card readers that accept SD and MMC memory cards in the same slot using a shared set of contact pins. The Court reasoned that Canon's argument was less one of claim construction than it was of non-infringement. It explained that if the accused devices have "a single port and a shared set of contact pins for both SD and MMC cards, it may be that the accused devices do not infringe the patents-in-suit." Id.

Canon makes two main arguments in its motion for summary judgment: 1) Canon did not infringe the patents because Plaintiffs' reading of the Claim Construction Order is overbroad; and 2) if Plaintiffs' reading is correct then the patents are invalid based on prior art. Plaintiffs argue that a genuine dispute of material fact exists as to each of these issues,

[1] This order was later amended. Docket No. 359. The amendment did not impact the construction of the terms at issue here.

particularly because Canon mischaracterizes Plaintiffs' reading of the Claim Construction Order. Because the Court concludes that Canon did not infringe the patents, it need not decide the issues related to invalidity.

LEGAL STANDARD

In patent cases, the parties' burdens on summary judgment differ based on whether the moving party has the burden of proof on the issue at trial. Where a moving party does not have the burden of proof, it "nonetheless bears the initial burden of coming forward with sufficient evidence to demonstrate that there is no material issue of fact that would preclude summary judgment, and that it is entitled to judgment as a matter of law." Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 806 (Fed. Cir. 1999). The burden then shifts to the opposing party, who need only show that the moving party is not entitled to judgment or that there are material issues of fact. Id. at 806-07. By contrast, where the moving party has the burden of proof on an issue at trial, it must show that there is no genuine issue of material fact as to every element of that issue. See Meyers v. Asics Corp., 974 F.2d 1304, 1307 (Fed. Cir. 1992).

Canon is entitled to summary judgment of noninfringement only if the facts and inferences, when viewed in the light most favorable to Plaintiffs, would not persuade a reasonable jury to return a verdict in favor of Plaintiffs. Bus. Objects, S.A. v. Microstrategy, Inc., 393 F.3d 1366, 1371-72 (Fed. Cir. 2005) (citing Anderson v. Liberty Lobby, Inc., 477 U.S. 242, 255 (1986)). "Summary judgment of noninfringement is proper when no reasonable jury could find that every limitation recited in a

properly constructed claim is found in the accused device either literally or under the doctrine of equivalents." Advanced Steel Recovery, LLC v. X-Body Equip., Inc., 808 F.3d 1313, 1317 (Fed. Cir. 2015).

DISCUSSION

To establish literal infringement[2] following claim construction, "every limitation set forth in a claim must be found in an accused product, exactly." Southwall Techs., Inc. v. Cardinal IG Co., 54 F.3d 1570, 1575 (Fed. Cir. 1995). Literal infringement is an issue of fact. Id.

Canon argues that its controller does not assign anything, but rather "merely implements the SD and MMC standards." Reply Br. at 4. The "connection paths along which signals travel . . . are predetermined in advance." Stevenson Dec. ¶ 66. The only difference is that three of the pins are not used for MMC cards but those three pins are used for data for SD cards. See id. ¶¶ 62-63. Plaintiffs argue that the controller assigns signals to signal lines based on whether an SD or MMC card is identified. The controller both assigns contact pins to signal lines and assigns signals between interconnection means and contact pins. Buscaino Opening ¶¶ 70-92. In particular, three signal lines that are not used in MMC cards are assigned data in SD cards. Further, the four SD data contact pads that accept data receive parallel data signals, while the one MMC data contact pad receives serial data signals. Id. This means that one contact pad switches

[2] Plaintiffs make no argument regarding the doctrine of equivalents in opposing this motion.

between parallel and serial data signals depending on the card inserted.

The mapping claim limitations were first added during prosecution of the '443 patent to overcome a § 102 rejection based on the Hung-Ju patent (Patent Number 6,402,558). Hertko Dec., Ex. 11, Hung-Ju. The original, pre-amended claims were directed to a memory card adapter with multiple slots of varying sizes, each equipped with a unique set of contact pins that come into contact with a corresponding memory card. The examiner rejected the claims based on Hung-Ju, which disclosed a memory card adapter "suitable for different types of memory cards by physically 'positioning contact pins and entrance slots in various locations.'" Hertko Dec., Ex. 10 at 2554. In response to the examiner's rejection, the applicant amended patented claims 1 as described above. In distinguishing the amended claims from Hung-Ju, the applicant stated:

> As shown, Hung-Ju discusses a memory card adaptor suitable for different types of memory cards by physically "positioning contact pins and entrance slots in various locations". Thus, Hung-Ju suggests using different sets of contact pins for different types of memory cards. By **physically placing memory cards in different positions in the adaptor**, different contact pins are in contact with the memory cards. Thus, Hung-Ju teaches away from the claim limitation using a controller chip to **"map at least a subset of the at least one set of contact pins to a set of signal lines or power lines"** where one set of pins is mapped to different signals depending on the type of identified memory card, as recited in Applicant's independent claims 1 and 12 [patented claims 1 and 9].

Id. at 2554-55 (emphasis in original).

By changing the claims from using different sets of contact pins for different memory cards to using only one set of contact pins for a variety of memory cards, the amended claims mark a

significant departure from the nature of the originally claimed invention. However, the applicant maintained that the amended claims were supported by the original specification, particularly pointing to Figure 4 in the specification as an example. Id. at 2554.

Figure 4 of the '443 patent shows an embodiment of the invention that utilizes twenty-one shared connector pins to accommodate three different types of memory cards--namely, Smart Media, MMC/SD, and Memory Stick--each with its own distinctive pin-outs. A person of ordinary skill in the art would understand from this table that, upon insertion of a Smart Media card, the controller will "map" or "assign" the nineteen requisite Smart Media card signals (e.g., D0/-WPSW, D1, D2) to the connector pins 1-19. Alternatively, when an MMC or a SD card is inserted, the controller will "map" or "assign" the nine requisite MMC/SD card signals (e.g., -WP, -CD, MCMD) to connector pins 2-4, 10-13, 18, 20, and 21. When a Memory Stick card is inserted, the controller will "map" or "assign" the six requisite Memory Stick card signals (e.g., -CD, BS, SDIO) to connector pins 5-7, 18, 20, and 21.

However, and significantly, Figure 4 makes no distinction between MMC and SD cards, putting them in the same column and treating them as a single entity. In fact, throughout the specification of the patents-in-suit, MMC and SD cards are consistently treated as one and the same. The specification refers to the duo as "MMC/SD" twenty-two times, without making any distinction between them, despite their well-known differences. In particular, Figure 2 of the patents-in-suit shows a "Prior Art" multimedia card adapter as having a set of nine contact pins (214)

that "provide interfaces for MMC/SD." See, e.g., '443 Patent at 2:24-28. According to the patents, this adapter was "available as a standard commercial product" at the time of the invention. Id. at 2:9-10.

Hung-Ju likewise described MMC and SD cards as sharing a slot and a set of contact pins. Specifically, Hung-Ju described its Figure 1, which shows a multimedia card adapter with a single slot 106b and one set of contact pins 104b for both MMC and SD cards, as follows: "The card insertion slot 106b can accommodate a multi-media card [i.e., MMC card] or a digital card [i.e., SD card]. Because the eight contact pins 104b are fixed at appropriate position on the lower frame 102b, the multi-media card [MMC] or the digital card [SD] can be inserted into the card insertion slot 106b with the input/output contact points facing down." Hung-Ju at 3:31-36.

MMC and SD cards are treated interchangeably in the specification of the patents-in-suit and in Hung-Ju because the SD card was designed such that an MMC card could be inserted into an SD card socket--that is, they could share a single slot. Hertko Dec., Ex. 6, SD Specification at 19-20. As explained above, the primary differences between SD and MMC cards are that the newer SD cards have nine contact pins/pads (four of which are for data) and are capable of transferring data either serially on one data pin or in parallel (i.e., four bits at a time) on all four data pins while the MMC cards have seven contact pins/pads (only one of which is for data) and can only transfer data serially (i.e., one bit at a time). Hertko Dec, Ex. 5, Infringement Contention Chart at 3.

Yet Plaintiffs' infringement theory is based essentially on the accused products' use of a slot with a shared set of contact pins for MMC and SD cards in compliance with the SD Specification. Specifically, the accused products are Canon printer/copiers, digital cameras, and card readers that include multi-memory card connectors for receiving at least SD and MMC memory media cards. Buscaino Opening ¶¶ 53, 55. Plaintiffs contend that the accused products infringe the "mapping" limitations in the '443 patent in the following manner. When the controller identified the presence of an SD card, it would assign four parallel data signals to four data signal lines, thereby assigning four contact pins to four data signal lines. When the controller identified the presence of an MMC card, it would assign one serial data signal to one of the four data signal lines, thereby assigning one contact pin to one data signal line. Opp. Br. at 5-6. Thus, Plaintiffs' infringement contention with regard to the "mapping" limitation bears no discernable difference from the initialization and data transfer process as set forth in the SD Specification.

The International Trade Commission's opinion further supports the Court's conclusion that reading an SD or MMC card in the Canon Products requires no mapping. It found that, "in order to communicate with the SD and MMC cards, no mapping is required. Similarly, the mere use of additional signal lines in some circumstances but not others, based upon fixed assignments, does not constitute mapping." Hertko Dec., Ex. 22 at 21.

Plaintiffs also contend that "Canon's [non-infringement] argument ignores the entirety of the mapping limitations which are found in the accused products, but absent in the SD

Specification." Opp. Br. at 9. Specifically, Plaintiffs contend that infringement of the mapping limitations is not based solely on sharing a set of contact pins or supporting more than one type of memory card in the same slot, but relates, among other things, to how the controller assigns signals to signal lines based on the identified type of memory card that has been inserted and how the signal lines, interconnection pins or means, and contact pins are arranged. In particular, Plaintiffs contend that the "mapping" limitations require "common physical connection to the controller," id. at 14, which is found in the accused products but not in the SD Specification. However, Plaintiffs fail to offer any evidence from the patent or the prosecution history that supports a construction that "mapping" requires "common physical connection to the controller." To the extent that Plaintiffs are arguing that the phrase "a controller chip to map at least a subset of the at least one set of contact pins to a set of signal lines or power lines" in the '443 patent should be construed as "a controller chip to map at least a subset of the at least one set of contact pins to a common set of signal lines or power lines," such a construction is unwarranted.

Plaintiffs also contend that transferring data in parallel or in serial constitutes mapping. See Opp. Br. at 14. However, claim 25 of the '424 patent, for example, does not distinguish between different types of data; instead, it describes "mapping power, ground or data signals." Further, as described above, SD cards are capable of transferring data either serially or in parallel. Having the capacity to transfer data in either form does not amount to assignment.

Because the patents-in-suit and Hung-Ju make clear references to MMC/SD cards, and because it was well-known at the time of the invention that the implementation of MMC/SD cards is controlled by the SD Specification that dictates how the cards share a slot and a set of contact pins, the claimed "mapping" limitations are not met by the functionality of accepting SD and MMC memory cards in the same slot using a shared set of contact pins. Because the accused Canon products accept SD and MMC memory cards in compliance with the SD Specification, and because no "assignment" occurs, the Canon products do not infringe the mapping limitations here.

CONCLUSION

The Court GRANTS Canon's motion for summary judgment that Canon's accused products do not infringe Plaintiffs' asserted patents. Canon's invalidity claims are moot. The Court directs the Clerk's Office to enter judgment in favor of Defendants and against Plaintiffs in this case. Defendants shall recover their costs.

IT IS SO ORDERED.

Dated: September 16, 2016

CLAUDIA WILKEN
United States District Judge